Archiving Data with the Planetary Data System

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Overview

- Pre-solicitation Conference Material
- OSS Science Data Management Policies
- Overview of Planetary Data System (PDS)
- Working with the PDS

Pre-Solicitation Conference Material

- Presentation by Dr. B. Geldzahler available at:
  - http://centauri.larc.nasa.gov/newfrontiers/pds_talk_072302.pdf
- This presentation complements and updates the Pre-Solicitation Conference presentation on the PDS

OSS Science Data Management

- **Key Objectives**
  - Preserve and utilize space science data as a National resource
  - “Open” Data: data ultimately belongs to science community and public
  - Appropriate and balanced allocation of resources for data issues through mission life cycle
- **Requirements**
  - Projects develop Project Data Management Plan which is reviewed as part of Non-advocate Review
  - ***Timely*** delivery of science data products to archives for open availability

What is the PDS?

- PDS is the official planetary science data archive for the NASA Office of Space Science (OSS) Solar System Exploration (SSE) Division
- PDS is chartered to ensure that SSE planetary data are archived and available to the scientific community
- PDS is a distributed system designed to optimize scientific oversight in the archiving process
- The PDS has been in existence in its present form for 11 years
  - evolved from an offline media archive to a distributed online system

PDS Organization

- **Central Node (JPL) -** Provides Program Management, System Engineering, standards development/maintenance, top-level catalog
- **Discipline Nodes -** Discipline Scientists provide expertise to interface with Flight Program Scientists and Central Node
  - Atmospheres (NMSU)
  - Geosciences (Washington U)
  - Imaging (USGS Flagstaff/JPL)
  - Navigation Ancillary Information Facility - NAIF (JPL)
  - Planetary Plasma Interactions (UCLA)
  - Radio Science (Stanford U)
  - Rings (NASA Ames)
  - Small Bodies (U of Maryland)

PDS Services

- PDS establishes and maintains standards for high quality data archives
- PDS works with missions to create complete data sets (calibrations, documentation, metadata)
  - PDS develops and maintains a suite of tools to help data producers create and validate archive-quality data products
  - PDS personnel can be funded by the mission to perform mission archiving tasks
- PDS provides expert assistance to the scientists who use the archives
- PDS ensures the viability of planetary data that might otherwise be lost

Considerations

- Early involvement/interface with PDS simplifies product delivery/pipeline
- Lead PDS Discipline Node scientists guide use of PDS standards by Projects for each data set
- Delivery of data to PDS must occur within six months of collection, allowing an exclusive data use period by Project PI’s
- Archiving with PDS is a requirement, not an option

Considerations (cont)

- Proposers Archive Guide (PAG) provided by the PDS to assist in archive costing and interfacing with the PDS
  - Cost Model available for estimates via Data Producer hyperlink at ***http://pds.jpl.nasa.gov***
  - Latest Standards and sample archive plans also available
- PDS is evolving… check for updates